

# VALIDATING SPECIALISTS

## or FOXES, HENHOUSES AND PROFESSIONS

A Professional Paper by Chuck Karayan, L.S.

### ABSTRACT

The purpose of this paper is to initiate consideration of a proposal for how the profession can best meet the emerging challenge of specialization. It begins with a discussion of the nature of a profession, the body of knowledge and academic learning. It looks at the regulatory environment of licensing professionals and the economics of private practice. The paper then proposes a new paradigm for validating specialists that would change their current status in a manner benefiting them, the professional society and the public. And, the paper examines the arguments for and against the concept as well as the opportunities and threats surrounding the proposal.

### INTRODUCTION

The surveying profession is at a critical juncture. Scientific knowledge is expanding rapidly. The equipment, procedures and services of surveyors are likewise quickly changing. Even a cursory examination of public and private practice reveals a growing trend towards specialization. How we approach the subject of specialization may determine whether or not surveying survives as a unified profession.

A brief analogy to "medicine" will help illustrate this point. As the biologic sciences expanded, so too did the scope of professional practice within "the healing arts". Today we have licensed specialists in optometry, podiatry, and pharmacy, who are members of distinct professions. In the past, Medical Doctors provided all of these services. This is one of the "possible futures" facing surveying.

By its nature, the surveying profession is "self selecting". Many people begin a surveying career but only those who are comfortable with taking individual-responsibility progress to the professional level. No place is this more evident than in the field when a decision needs to be made. There is one person on the crew who ultimately makes the decision and is held accountable for the result. In the end, one person signs and seals the finished product, assuming full responsibility for it. Consequently, surveying is a profession populated by self-reliant individualists.

We are at a point where the profession can choose its own future. Surveying employs such a small portion of our society that it is only rarely mentioned in "labor statistics". We can ill-afford to be splintered into separate and distinct professions, as was the case with the healing arts. Perhaps as a result of their individuality, surveyors have - historically - had difficulty setting goals and adopting action plans as a group. But, unless we collectively provide for the different types of professional practice the potentially fractious reality of specialization will lead us in ever diverging directions.

In the current situation, individual practitioners publicly offer their services as specialists within a narrow segment of our profession. To neither the public's nor the individual's benefit, they do so without any collectively agreed-upon standards or even definitions of the professed expertise. If "rugged individualism" prevents collective action, the status quo will continue. The likely outcome will be the demise of the profession, as we know it.

### **PROFESSIONALISM**

The term *professional* has taken on a common meaning of simply being paid for an activity, such as a "professional" athlete. None-the-less, most people somehow distinguish this usage from "the professions". Black's Law Dictionary defines *profession* as a "vocation or occupation requiring special, usually advanced, education and skill". And it goes on to say "as applications of science and learning are extended to other departments of affairs, other vocations (beyond law and medicine) also receive the name, which implies professed attainments in special knowledge as distinguished from mere skill." At the heart of professionalism is the *special knowledge* which consumer's lack, thereby leaving them little choice but to rely on the opinion of the professional. And, this is the distinction between *trades* and *professions*, consumers do have enough knowledge to evaluate the product or service provided by tradesmen.

Universally, licensing professionals provides them with an exclusive franchise. No one, other than a licensee (or someone the law exempts from licensure) may legally practice the profession. The law creates a monopoly and punishes those who attempt to invade the protected space. For American surveyors the "protected space" is very broad, encompassing boundary determination, construction layout, topographic mapping and much more. Licensed surveyors in many jurisdictions are

also authorized to enter private property without obtaining the owners consent, and to administer oaths and take testimony under penalty of perjury. But, by far, the major advantage of being licensed is the restriction of competition from the unlicensed.

The benefits of professional recognition are "balanced" by the responsibilities of such stature. Individually as professionals, and collectively as a profession, it is our duty to help protect the public health, safety and welfare. Professions establish standards beyond *minimal qualification* and assist their members in achieving higher levels of service to the public. Professions are also "self policing", they provide "peer review" and monitor compliance with the collectively agreed-upon standards. For surveying to be held in high regard by society, it must be demonstrate responsibility in meeting these duties.

### **THE BODY OF KNOWLEDGE**

By the second half of the eighteenth century science, as we know it today, was beginning to take shape. Learned people focused on particular topics and became known as "chemists", "geologists", etc. The body of knowledge was rapidly expanding and ushered in the industrial age. "Science" was chic. At this time, the profession of surveying essentially involved use of the compass and chain. And, although these tools were ultimately replaced by the transit and steel ribbon tape, the practices of the profession remained relatively stable until the last half of the twentieth century.

In the last fifty years the technological advances in surveying have been staggering, both in their extent and the rate at which they have occurred. Hand-held computers, electronic distance measuring devices, robotic instruments and satellite positioning are but a few of these changes. Today, surveyors provide services undreamed of thirty years ago. The surveyors of 2020 may well look back at today with a similar feeling. Change is mandatory; the alternative - stagnation - is death.

Fifty years ago there were no academic surveying programs in our colleges and universities. Today ABET accredits 21 programs and there are many more which have not yet received that certification. At present a growing minority of jurisdictions require an undergraduate degree as a pre-condition of acceptance to the licensing exam. The accredited programs "focus" on a wide range of study areas, from photogrammetry and remote sensing to geodesy to civil engineering

applications, and more. Although the number of graduates does not yet equal the attrition rate of the profession, this is but the "tip of the iceberg". In a very few years these "college educated surveyors" will equal or outnumber the "apprenticed surveyors". And, they will likely seek to leverage their *specialized academic backgrounds* in entrepreneurial ways, that is, specialization will become more common.

Beyond the question of initial knowledge lay the matters of "keeping up" and human memory. Approximately 75% of the jurisdictions now require some form of continuing education as a condition of continuing licensure. It seems likely that virtually all surveyors will be subject to this control within the near future. The profession has generally supported this requirement. We have done so because most of us recognize that changes in land use and subdivision regulations, new equipment and technologies, etc., necessitate "up dated" learning; because some of what we once knew has been forgotten; and because some of it was not fully understood in the first place.

As with all change, required education - both initial and continuing - raises new concerns. College level programs have often experienced low enrollments. Considering the cost of higher education and the earning potential in surveying, many students choose a different field of study. Economic theory tells us that either the investment must go down or the benefit must go up if enrollment and the number of programs are to increase. Although scholarships and internships help to defray educational costs, the profession must find ways to enrich the academic experience of students. And, the long-term solution must include a brighter economic future for graduates.

There are also problems in the requirement of continuing education. The individual is expected to invest time and money in maintaining and expanding professional qualifications but there are no objective quality controls over the means of doing so. Bearing the burden of professional development must be accompanied by some assurance of the value to be received. Moreover, the requirements need to be expanded to include technical, ethical, business and communication subjects. We have set out on the right course but some "fine tuning" remains to be done. The real question is how best to accomplish this, through government or self-regulation.

## THE REGULATORY ENVIRONMENT

By the early twentieth century, particularly with the problems of The Great Depression, American society shifted much of the responsibility for "risk management" from the individual to government. There followed several decades in which governmental regulations and controls expanded, often down to minute details of activity. Professional activity was defined on a broader basis, thereby including larger numbers of people as well as what and how things were done. However, by the end of the twentieth century there was a resurgence of individual responsibility emerging, based, at least in part, on the *deregulation ethos*.

Many state legislatures have adopted a *sunset* approach toward "boards" which regulate professional activity. Periodically these boards must appear before legislative committees to justify their continuance. If they do not convince the legislators that there is a "public need" being met by the board's regulation and control, its authorization will expire. The major justification for professional licensure and regulatory boards is that without such controls the public would be unduly exposed to harm. The catchword in this is *unduly*; how much harm would occur without the board's regulation and control must be balanced against the individual and societal cost of reducing the frequency and magnitude of "harm" which occur despite its existence.

Ostensibly, the boards provide *preventative enforcement* by verifying the qualifications and knowledge of those who seek to practice a profession. That is, they "weed out" those who could cause harm, the unqualified, by excluding them. The boards are also intended to provide *corrective enforcement* through disciplinary processes such as reprimands, fines, suspensions and revocation. That is, they "weed out" those who do cause harm, the negligent and the incompetent, through punitive action against their licenses.

But, the profession must ask itself, is the "board" effective in its preventative enforcement? Many within the profession have questioned the efficacy of the examination process. Some criticize the depth of the questions posed, others the breadth. Some professionals express concerns about whether the exam should have a greater emphasis on theory or application. We all have known an aspiring licensee who simply "froze" on exam day. And most of us know someone who took the test six, eight, ten times before finding the version which

"everyone" passed. Does the exam "pass" the knowledgeable and "fail" the unknowledgeable? No matter how the question is answered, it must be remembered that the exam is only intended to establish *minimum qualifications* and does not bear on the issue of specialization.

And the profession must ask itself, is the "board" effective in its corrective enforcement? Many studies have shown that regulatory boards are much less inclined to discipline the licensed than they are to prosecute the unlicensed. Moreover, the boards' statutory authority often does not include a full range of options. Some statutes contain vague and ambiguous phrases that are difficult or impossible to enforce. Add to these problems the fact that boards are often restricted in terms of resources (both knowledgeable staff and funding). No matter how (well) these problems are addressed, it must be remembered that corrective enforcement has only to do with minimum standards and does not bear on the matter of specialization.

Rather than government controlled "boards", some people prefer a *free market* approach to professional regulation. They view the monopoly which licensure creates as simply a means of decreasing competition and increasing personal profit. The arguments against licensing center on both philosophic and pragmatic grounds. The three most common objections are: (1) the idea is paternalistic (the public is not able to decide for itself who is qualified); (2) government control promotes a lack of personal responsibility (the public simply relies on the regulatory agency's decision, i.e. the license); and (3) boards often become *captured* by the "regulated" profession (the board is dominated by members of the profession and simply protects its "monopoly").

There remains an additional topic with regard to licensure. Professionals may be authorized to practice across the full spectrum of a field or only within a specific portion. That is, a license can be "generic" or "discipline" based. The former requires broad testing, which, due to exam-time limitations, prevents an "in depth" test. The latter requires multiple "narrow" exams, which increases the cost of administration. Looking at all regulatory regimes, the trend is toward generic licensing.

The theory of generic licensing presumes that the individual practitioner will limit him/herself to those areas of the profession within their personal expertise. It allows the licensee to expand his/her body of knowledge and then expand the services they offer to the

public. This creates increased competition and, presumably, lower costs to the consumer. But, generic licensing relies more heavily on civil lawsuits and the courts to "regulate" those who practice outside their expertise than discipline-based licensing does.

The theory of discipline-based licensing presumes that the practitioners have distinct bodies of knowledge, generally through different academic backgrounds. If, after initial licensure, a professional acquires additional knowledge he/she is required to pass an additional exam before putting it to use. This impediment to expanded practice tends to reduce competition, thereby increasing consumer cost. And, discipline-based licensing increases the burden on regulatory boards through more specific and complex regulation.

## **ECONOMICS**

While high ideals and lofty ethical standards are a legitimate part of a profession, we cannot lose sight of the fact that surveying is an occupation. It is the means by which we earn our livelihood. The economics of the profession cannot be swept aside in an intellectual rush toward "perfection".

The private practitioner must make a profit to survive. This is not always easy, given the high cost of new technology and quality personnel. Modern practice usually means a professional office suite, Errors & Omissions insurance, advertising, etc. - all of which further raise the cost of doing business. And, don't forget the surveyor "over there" who almost always under-bids.

Pricing for goods or services occurs within a spectrum that has actual cost at one end and "whatever the traffic will bear" at the other. Competition tends to drive prices down. An unwarranted attempt to raise prices often results in a loss of market share. In a narrow profit margin environment, such as surveying today, traditional wisdom would have us believe that higher profits can only be achieved through increased efficiency. This usually means investing in new technology and or better (higher priced) personnel, either or both of which can further stress profitability.

From an "economics" point of view, competition based solely on price is a downward spiral ending at a near-zero profit level. From a "political" point of view it results in a "tyranny of the cheapest". All too often lower prices are the result of inferior products and or services. Inferior quality harms the consumer and damages the profession's reputation.

But, price is not the only factor that consumers consider. Most people know that they are unlikely to be able to buy a Rolls Royce at a Volkswagen price. This is not to say that price is not a relevant factor in the client's decision-making process, but rather that today's clients are more sophisticated than we sometimes think they are. The true value of any product or service is a blend of price and quality. Many marketing studies have shown that consumers will pay more for an item if it is perceived as having a higher quality. The proliferation of "high end" retailers and products bears witness to the validity of these studies.

Competition based in part on the quality of the service rendered can provide a different means of improving profit margins. Some clients do not need higher quality professional services (an expert) and the true professional guides them accordingly. It should also be kept in mind that only some of the market is willing to pay more for quality regardless of its need, others will always decide based on price alone. Before the downward spiral of price-competition can be counterbalanced by quality-competition, it will be necessary that clients have a means of verifying the asserted higher quality.

### **A NEW PARADIGM**

Specialization within surveying is already here, and it will almost certainly become more common as time goes on. Reading professional journals or the phone book will provide ample evidence that many surveyors already limit or focus their practice. Hydrographic and Topographic Mapping, GPS, Land Use and Development, GIS, Boundary, Construction Layout, and Forensics are but some of these specialties. Given the wide range of services available today, none of us could have expertise in all of them.

Through its professional society, the medical community has established methods by which the public can identify those members with specialized knowledge and skill. Doctors demonstrate their

expertise through acceptance into Academies, Colleges and Institutes for Orthopedic or Plastic Surgery, Infectious or Cancerous diseases, etc. Like surveyors, Medical Doctors have "generic licenses", but the AMA provides the public with assistance in determining professional qualifications when expertise is needed.

**The National Society of Professional Surveyors needs to establish a methodology for recognizing and validating specialist associations.** They may be known as Academies, Colleges, Institutes, or some other name. They may be internal organizations or separate entities affiliated with NSPS. Some members of the profession may have expert knowledge, skill, experience, training, or education in more than one specialty and the criteria of recognizing the "associations" must provide for that possibility. But the profession and the public need a method of distinguishing the general practitioner from the specialist.

These specialty groups necessarily will have some membership requirements that differ from each other. But NSPS can, and should, establish basic criteria of determining eligibility, such as NSPS membership and continuing professional growth. Other criteria could include length of practice, advanced/specialized education or training, or recommendation by members of allied professions or occupations. NSPS should also establish "outer limits" which will prevent these groups from becoming too restrictive in their admittance and membership requirements.

Meaningful acceptance of these groups may, in part, depend on appropriate collaboration with other professional or occupational organizations that have a common interest in the particular field. Just as we have created standards for title insurance surveys by working with the American Land Title Association, and certification of surveyors conducting flood plain investigations by working with the Federal Emergency Management Agency, NSPS should seek out kindred groups both within and without ACSM.

The associations may, as other professions have done, establish "grades" of membership to further aid the public in matching an individual with their need. The most common approach appears to be three "grades" based upon increasing levels of experience, attained knowledge and skill. Some of these organizations have additional requirements for the highest "grade", such as a special examination.

The associations must set high goals and standards that have nothing to do with "popularity" or "fame" within the profession. Both admittance to, and continued membership in, the associations must be difficult; they must signify compliance with stringent professional and ethical standards. Objective and high standards, genuinely adhered to, are necessary for meaningful acceptance by outside groups, the courts and the public. Without general acceptance, the associations will have little value.

### **"PRO'S" and "CON'S"**

The concept of validating specialists will benefit the individual surveyor, the professional societies and, most of all, the public. Professionals with expertise within a field will be able to demonstrate it in a dignified manner and gain the competitive advantage that their expertise deserves. In turn this competitive advantage, gained in part through NSPS membership, will provide an incentive for non-members to join the professional societies. NSPS will then "speak" with a more unified, stronger voice. And, the public will benefit from an increased ability to recognize the differences between licensees. They will be less susceptible to the unqualified and unscrupulous. And, consumers will be better equipped to decide when, or if, expertise and a higher fee is warranted.

This new approach requires that the profession act in a manner different than it has acted in the past. We must be willing to focus not on "individual responsibility" but on "professional responsibility". If the idea is to succeed surveyors, and the professional societies, must change their thinking processes. We must be willing to establish standards of practice and enforce them. We must be willing to tell our colleagues when they need to improve their skills or services. Our history indicates that this will not come easily.

The concept of validating specialists offers the opportunity to establish surveying as a true profession. It also offers an opportunity for our professional societies to include a greater portion of the community. By establishing objective standards that can withstand scrutiny, NSPS and its affiliated associations will provide professional self-regulation that assists the public and the boards. Moreover, validating specialists will decrease the need for legislative controls.

The paradigm contains potential pitfalls. If we fail, as a group, to consider all points of view, implementation of the concept could "drive a wedge" between us and splinter the profession. While total agreement is unlikely, everyone must be heard - and divergent thoughts must, as much as possible, be included. Perhaps the greatest danger lies in being perceived as "the fox offering to guard the henhouse". Stringent standards, rigorously adhered to, will show the world that this is not the case.

### **CLOSING COMMENTS**

Rather than allowing government to address the situation, the profession must take control of its own future. Politicians and or their appointees do not have the ability to identify or quantify professional expertise, we do. It is unreasonable to expect politicians, engineers, and or public-members of regulatory boards, who all lack the requisite specialized knowledge, to be able to identify what constitutes surveying expertise. Only through peer review can this be accomplished. In an age of growing specialization, that is what the profession and the public needs.

In the past, the "independence" of surveyors has been a nuisance. We failed to collectively and articulately differentiate the surveying and engineering professions, resulting in our dominance by "engineering" boards of regulation and academic curricula approval. We failed to demonstrate the need for surveyors to be at the heart of GIS databases, resulting in their management by people who lack our ability to understand the import of differences in cadastral data quality. Today, as a result of the growing specialization, this independence poses a very real threat to the profession as a whole. Unless we address the qualifications of surveyors practicing the various specialties in a manner that adequately protects the public health, safety and welfare other elements of society are likely to do so. And, as in the past, we will be forced to live with those decisions.

The choice is ours, as individuals and as members of the profession. We can choose to maintain our "independence" and thereby paralyze the profession as a whole - resulting in non-action. The most likely result of this approach will be continued specialization until various elements of the profession are recognized as separate and distinct activities no longer part of surveying. On the other hand, we can choose to recognize that our best interests, individually and collectively, as well

as the best interests of society require the profession to establish and maintain standards of practice for the sub-disciplines of surveying. In other words, the profession needs to validate the genuine specialist.

## **BIOGRAPHIC NOTES**

Chuck Karayan began surveying 42 years ago. Since then his career in public and private practice has taken him from the deserts of southern Arizona to the forests of northwestern Washington. He is currently licensed in Oregon and California and a Contributing Writer for "The American Surveyor" magazine.

Mr. Karayan is the Chief of Training in the Office of Geometronics for the California Department of Transportation. Previously he has served as County Surveyor in Clark County, Washington; Survey Operations Manager for Marx & Chase, Gresham, Oregon; Regional Property Engineer of the Southern Pacific Railroad, Los Angeles, California; and directed the Land Surveyor's Training Center in Phoenix, Arizona.

Chuck recently founded GEOLEX Consulting Services where he will direct his full-time efforts upon retirement later this year. Academically trained as a Geographer, Chuck attended the University of San Fernando Valley, College of Law. For over 25 years his career has focused on boundary and land title matters as a manager and expert witness. In addition to authoring texts and professional papers, he has been active in formal and continuing education of surveyors, realtors and attorneys since 1978.

## **CONTACT INFORMATION**

Chuck Karayan, L.S.  
GEOLEX Consulting  
P.O. Box 160192  
Sacramento, CA 95816