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More on Apprenticeship

I have been following the discussions about this subject at various locations and in many forms for many years now. In Dave Gibson's article "Licensure by Apprenticeship: Effects on the Surveying Profession" [Vol 7, Issue 4], he makes some good points. However, what I find difficult to accept about most of the opinions I have heard is that the argument seems to be always posed as an "either/or" situation. Apprenticeship has worked in many cases just as education has. Why can't we be an inclusive rather than exclusive group and allow for both possibilities. I realize that by doing this we will forfeit our "professional" status as determined by the courts. But we will allow for many more good and qualified surveyors to join our ranks and carry on our beloved profession.

I see two issues that prohibit this. First, many land surveyors are too infatuated with the "professional" status while, in my humble opinion, they should be more concerned about acting professionally. Second, the elephant in the room that no one mentions is that by creating an exclusive profession we will limit our ranks and thereby increase our incomes over time. Again I see this as being unprofessional. But that's just how I see it.

*Earl F. Henderson, PLS
Boulder, CO*

Gibson Replies

It would be nice to have both systems—apprenticeship and college. However, nowhere in the U.S. have both systems been successful in working together. For example, in Virginia where the professional society has a formalized apprenticeship system, the academic program at Old Dominion University struggles. In Indiana, the apprenticeship system has been in place, leading Purdue University to drop the undergraduate surveying program. The two compete adversely with each other, and I'm afraid that it is one or the other.—D.G.

Surveying Semantics?

As a subscriber of *The American Surveyor*, it wasn't until recently that I paused to give some thought to the magazine tag line "*A Foot in the Past . . . An Eye to the Future*". I think it is a pretty accurate description of some surveyors that I know. But when reflecting upon it further, I wonder, should it not be the other way around, "*An Eye to the Past . . . A Foot in the Future*"?

There has always appeared to me a reluctance, by some of those in the surveying community, to embrace new ideas. They become very comfortable with the methods and procedures that they were trained in. Sure, they like the new shiny "toys" when they come out on the market. Yet, there are few who will, with eagerness, step out of their comfort zone and rise to the challenge of discovering new and innovative ways of applying and transforming these "toys" into useful, and more than that, highly productive "tools."

It was back in 1978 that a student was first introduced to the Apple II "personal computer" while in his second year of college. His Surveying Calculations class was learning to write traverse programs on an IBM computer the size of a large work cubicle. Each program command line was punched into a separate card and the stack placed into the computer for processing, very time consuming, incredibly tedious, and at times, extremely frustrating. One day his instructor came into class about ready to jump out of his skin with excitement. He had in his hand an article on the introduction of the Apple II computer. He told the class that there would be one in every household across the nation. Returning home from school that day the student related to his lovely young bride what his instructor had said. Her response: "What in the world would I ever need a computer for?" To this day she can't live that statement down; being unable to live without her netbook.

After graduation, he went to work for an engineering firm in the deserts

of Southern California. By 1982 he had purchased his very own Apple IIe compatible machine and wrote some basic survey programs for field note reduction and processing. When, in the late 80s, he moved into the office to manage the survey department, it seemed like his employer still had "a foot in the past". So, with "a foot in the future" he purchased his own 386 IBM PC compatible computer for \$3500 and took it to work to use in the office for calculations & drafting. Shortly thereafter, his employer stepped out of the past by introducing PCs with CAD into the survey department.

On the other hand, today with all of our technological wonders, such as displays reading out to the nearest quadrillionth, we tend to have "an eye to the future", and are many times blinded to the past. With highly "precise" tools we establish highly "precise" corners some times next to highly "accurate" existing monuments. I say "accurate" because even though they were not set with today's "precision", they *were* set with precision that was acceptable back then. As Chris Wickern pointed out in "Whose Footsteps Are They?" [Vol. 7, Issue 3]: "*Our laws, rules, and the Courts seem to be clear. Once a corner has been established, it is always established, with the exceptions of gross error or fraud.*"

He was talking about the Public Lands Survey System. I cannot enumerate the number of times I have come across two tagged survey monuments less than a foot apart purporting to be the same sectional corner, at times, in extreme terrain. If the more recent surveyor would have had "an eye to the past" he would have understood that the first surveyor had established the corner within acceptable "precision" using acceptable methods for his generation.

We need to be able to clearly *see* into the past and understand the historical data, its limitations, precision, and level of accuracy attainable given the tools, procedures, and acceptable methods in

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existence during that period. In addition, we need to be willing to take that *step* into the future, change with the times, make the most of the opportunities made available through the wonderful world of technology and truly embrace new ideas.

“A Foot in the Past . . . An Eye to the Future” or “An Eye to the Past . . . A Foot in the Future” . . . surveying semantics?

*Francis “Frank” D. Romano, Jr., PLS
California DOT*

Great Memories of a Great Profession

I can't resist a comment on the incredible story of Herr Niebuhr [Vol 7, Number 5] and the inserted Laser Technology ad about the Grizzly.

I have been active in surveying since 1960. My son Jeremy worked with me for several years, and during one three-year period had to enlist my help with several animal encounters.

We were surveying in a high mountain forest in western Colorado when we heard a crash and looked up into the eyes of one of the largest bears ever encountered around here, estimated to be between six and seven hundred pounds. Our only defensive weapon was a new and very sharp range pole. I suggested that at 50 feet we just stand there and wait him out. It worked and he finally ambled off through the forest (to our profound gratitude).

Another time Jer called me on the radio to say that a very large bull elk was blocking the path back to our Scout. I suggested that Jeremy move to a different location and get the bull into a position where he could not see Jeremy sneaking up. When that didn't work I finally got in our airplane and buzzed the bull to get him to move. Turned out the bull was protecting a few cows just out of sight over the ridge.

On another job Jeremy went ripping around a blind comer on our four wheeler and nearly ran into a 2,400 pound buffalo bull sleeping in the road. He made a record 180 and got out of there. The next day we needed to set the last pin on a huge

job in the forest on the rim of the Black Canyon National Park. We drove into the area only to find the same bull and a younger 1,600 pound bull sleeping within 150 feet of our target. Jeremy jumped off with the GPS and did a quick set while I turned around and kept the Polaris running. The old bull got up and pawed up dirt over his back but didn't move. We set the pin, grabbed the gear and took one last look at the bull. He stayed put; we didn't! I had no confidence that the old bull couldn't outrun the four wheeler since all we had was a primitive two track Jeep trail to drive on and he didn't even need a trail. That cap remains unstamped.

Later on, Jeremy was setting some pins in Delta, about 30 miles away, when he called me again for help. He had to go through a farm yard on a riverbank property with no other access and a billy goat wouldn't let him. He was near the airport so I told him to meet me there. Once more I jumped in the plane and flew down. We drove into the yard and sure enough, the old goat was blocking the way with his head down. I noticed he had a collar so I just walked up to him, ignored all his phony menacing moves, grabbed his collar and tied him to a fence (I grew up on farm). When the people came home I told them about the problem. They laughed and explained, “He grew up in our house with the dogs. He just wants to play!”

Events like these lend more color to an already fascinating profession. There were others (like dodging a wild pig that was chasing armadillos, or measuring a 20 foot 300 lb anaconda in the Bolivian rain forest) but Jeremy wasn't involved. Enough already!

Don Geddes, PLS Ret.

Crawford, CO

Got some feedback? We always enjoy hearing from our readers. E-mail us via www.amerisurv.com, or send a letter to: The American Surveyor, P.O. Box 4162, Frederick, MD 21705-4162. We reserve the right to edit letters for clarity and length.