

Arrogance

I started receiving your magazine only recently. I have noted that every issue has at least one article dealing with “hidden” physicists, those whose job titles do not explicitly have something to do with physics. Perhaps it seems a big issue to many, but these arrogant individuals need to be happy they are getting paid.

I ran into the superiority complex of physicists when I finished my B.S.E.E. degree. I had taken some classes in the physics department to fulfill elective requirements. By the time I finished, I had enough credits to qualify for a minor in physics. However, one of the physics classes had two different class numbers: one from the physics department and the other from the electrical engineering department. The class was the same class; people in the class with me had registered using either number. The teacher, the tests, and the grades were all the same. However, since I didn’t use the physics department

number in registering, the physics department would not recognize that class! They denied a minor to me for a class taught by their own professor.

I have since seen other examples of this arrogant attitude by some who have obtained degrees in physics. It seems that many need a good dose of reality. Many people work in occupations with titles that have nothing to do with their college degree. The education is still valuable, but it is not the end of their being. I use principles learned in my physics classes very often, but I also use knowledge that I gained as an inquisitive boy who liked to tear things apart, and as a boy in a poor family that had to do its own home and automobile repairs.

No other magazine I receive spends so much time in self-pity or self-hype as this



magazine. Get a clue. It really does not matter what your job title says as long as you do something you like to do and you are receiving fair compensation.

Paul Syndergaard
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The attempt to bring an identity to industrial physicists is motivated less by arrogance than by the behavioral differences between the engineering and physics communities. Unlike the engineering community, which celebrates new B.S.E.E.s as full-fledged professionals, the physics community limits its celebrations to new Ph.D.s. Those deserving individuals with B.A.s, B.S.s, and M.S.s in physics are given no professional recognition within the physics community.

Still another behavioral difference is this:

University-based engineers establish and nurture ongoing relationships with industry-based engineers and human resource directors. Consequently, when a B.S.E.E. seeks a position in industry, the advance work has long since been done. Responsible industry people know what an engineer is and what engineers do. This is definitely not the case with physicists.

Physics baccalaureates are unknown entities to most industrial people and, as is often the case, unknowns are shunned. Baccalaureates with a physics major typically have a difficult time landing the first full-time position and, according to many, the problem arises from the mystery that enshrouds physics and physicists. Once physicists land a job, our data show that they are valued by their employers. But physicists are immediately given a *nom de plume* in company records, and then it is forgotten that these valued employees have bachelor's degrees in physics. The problem is self-perpetuating: Next year's physics baccalaureates must start, once again, from square one.

The avalanche of letters that followed my short article "Find the Hidden Physicist" (*The Industrial Physicist*, September 1997, p. 52) confirmed that many industry employees identify themselves as hidden physicists. It is natural for *The Industrial Physicist* to respond to these individuals, since the purpose of this magazine is to call attention to the value of physicists in the workplace. A touch of arrogance? Perhaps, but an eminently reasonable thing for physicists to do.

John S. Rigden
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European scene

For many industrial physicists with a Ph.D., having a job title not containing the words Physicist, Scientist, or Researcher is not just a question of pride. This is what physicists are trained for and what most of them want to do. Usually the job title is a pretty correct description of what someone is actually doing, which often has nothing to

do with scientific research. Today, for many young scientists—even for the most brilliant ones—it is not a choice between industry and academia as it used to be, but simply a choice between industry and unemployment. Especially in Europe, basic scientific research seems to be of little value for major parts of society and despite promises given by politicians to the contrary, budget cuts generally hit science funding first. Nevertheless, a physics education is not the worst basis for an industry career. As soon as one has accepted the situation and is willing to engage enthusiastically in things different from physics (which has been pretty tough for me), all the doors are open.

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Looking back

While in college in the late 1940s, I was certain I wanted to get into some technical profession, possibly electrical or mechanical engineering. And my first year or so of course work was so directed. But alas, time flew by, and my World War II GI Bill benefits were about to run out, so I proudly earned a degree in physics. What next?

My first employment was with the research laboratories of a highway department. My work involved the development of test methods, equipment, specifications, and standards for the various optical systems now common on our highways—reflex reflective devices, illuminated signs, general illumination, etc.—and included the photometric, color measurement, and specifications for these. A real challenge for a new graduate surrounded by civil and mechanical engineers. Time came for a promotion. Unfortunately, the Civil Service Commission required that I become a registered civil engineer! But I was too busy keeping up with the rapid and fascinating advancements in photometry and color physics and had no time for studying civil engineering. The next step? Find employment elsewhere.

I was fortunate to spend the rest of my

Hidden Physicists

employed years working on many of the fascinating challenges of the automotive industry. It was exciting and professionally rewarding. Most of my colleagues in the applied physics section of the Manufacturing Research Office were not physicists, but they approached problem solving in much the same way. And most important, they all worked as an effective and cooperative team. Our common objective was solving problems. We devised, invented, presented technical papers, published, and made effective contributions to applied physics in this very diversified but basic business. Interestingly, my automotive manufacturing employer was also a basic manufacturer of glass, paint, sheet vinyl, steel, and lighting units, in addition to many other things that could benefit from an applied optics physicist who started out considering an engineering degree—but never decided which field!

Now retired, I look back at those years as an enjoyable, rewarding, and challenging part of my life, which, as others have brought out, required a great deal of communication with management.

Bruce W. Preston
Dearborn, Michigan

I retired after teaching physics at the collegiate level for 37 years. Since 1995, I have been working as a consultant in the instruments maintenance laboratory of an eye hospital. Several of my friends have asked me what a physics specialist can do in an eye hospital. My answer is that physics is everywhere. Modern eye hospitals have instruments such as ophthalmoscopes, operating microscopes, lasers, sonography instruments, and a variety of special lenses. Maintenance of all these instruments requires a good knowledge of physics and electronics. For young physicists seeking a career, this is a fertile field, especially in a developing country. There is scope for innovation, modification, and improvement.

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