

into the field of physics and thus are more closely aligned with the fundamental ideals of a self-regulating profession. We have a Code of Ethics and an expectation that P.Phys. holders are competent and ethical and that they will ensure that they maintain their scientific competence and their knowledge of the ethical and legal practices required of a professional. For this to be reliable, we need a well defined and transparent mechanism to identify and discipline those P.Phys. holders who do not live up to these standards. Herein lies a potential conflict of interest, because the objectives of a professional society such as the CAP, which provides services and advocacy for its members, could at times be at odds with the goals of a self-regulated profession which should have as its primary objective the protection of the client or public. That is why the regulatory arm of many professions is distinct from, or at a minimum operates at arm's length from, the advocacy body.

While the P.Phys. holder is expected to abide by a Code of Ethics, it is not very detailed and most professional organisations have a much more extensive Code of Practice defining (often with examples) what the regulated professional can and, more importantly, cannot do. I would argue that a more detailed Code of Practice would be helpful to all practicing physicists, but particularly for those of us who work with or in Industry. These rules of conduct should assist, not hinder, professional physicists in providing physics services to their clients (which may include students and colleagues in academia) in a way that ensures the clients and public interest is protected. It is important to note that these codes of conduct should not prevent a P.Phys. holder from making sound business decisions on behalf of their employer or company, even if those decisions are not universally welcomed by the employees or physicists whom they affect. While the lack of statutory regulation may be seen as a limitation to the expansion of the P.Phys. certification, there are good

examples of professions where employers have come to recognise (without this being a legislated requirement) the value of hiring self-regulated professionals.

The CAP P.Phys. process is well managed by the CAP's Director of Professional Affairs aided by the dedicated members of the Professional Affairs Committee and the Professional Certification Committee. However, more work still needs to be done as the P.Phys. matures and hopefully expands. This could include the removal of the exemption to writing the professional practice exam and a more robust method for evaluating continuing professional development. All physicists, irrespective of the field or institution in which they practice, should identify with the goals of the P.Phys. program, which at its root is aimed at strengthening the role of physics and physicists in our society by ensuring that our actions are not detrimental to that society. I would advocate that every CAP member should apply for a P.Phys. designation, and demonstrate through a high standard of practice, professionalism and by continuous professional development that the ideals of a self-regulating profession are alive and well in the Canadian physics community.

SUGGESTED ADDITIONAL READING

Paton, Paul D., *Between a Rock and a Hard Place: The Future of Self-Regulation - Canada between the United States and the English/Australian Experience* (August 14, 2008). *The Professional Lawyer*, Fall 2008. Available at SSRN: <http://ssrn.com/abstract=1226802>.

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REFERENCES

1. <https://en.wikipedia.org/wiki/Profession>.
2. A.L. Barlow review of Ref. [3], *Harvard Educational Review*, **50(3)**, 427–432 (1980).
3. Larson, M.S., *The Rise of professionalism: a sociological analysis*, Berkeley, University of California Press, 1977.
4. Schultze R., *The Canadian Property Valuation*, **56(3)**, 26–29 (2012).
5. *Who Watches the Watchmen? The Role of the Self-Regulator*, C.D. Howe Institute, Commentary No 416, October 2014, Toronto.

THE ENTREPRENEURIAL PHYSICIST

BY LOIS BROWN, RTR (CAN/USA), ACR, MSc., P.PHYS.

When I was very young I collected wildflowers at our summer cottage. I then went around to various family members and invited them to pay to have a peek at my floral arrangements. I had mixed responses depending on the attitude of the people I approached.

I did learn some very valuable lessons during that exercise which have stood me in good stead over the span of a lifetime in sales and consulting.

I was fortunate in that I had a talent for selling and have done so in various capacities throughout my fifty-year career in the Radiation Sciences. The following points are what I have developed as my Fourteen Commandments that are vital to any sales, whether you are selling knowledge or products. To succeed and thrive, your business acumen must be based on these foundations.

1. Be Open and Transparent with Employers, Clients and Customers. Before any change in your career path, make sure you have covered all the bases with your present employer or with anyone else with whom you have business dealings of any sort. You must be open and transparent. In other words, don't give up your day job for the enticement of a lucrative but short-lived contract.

It is best to have a hard copy of your present contract so that if any discussion arises you have proof that this was discussed and cleared before any dissension arises.

2. Be Scrupulously Honest. Always. It is a small world and often separated by very few degrees. Your reputation as a consultant will be compromised if you are perceived as being even slightly ambiguous.

3. Be Very Reliable. If you have an appointment and have set a time, then plan to arrive at least 10 minutes early. This is vitally important. If you are held up in traffic or by unforeseen circumstances, then call in at least ten minutes prior to your expected time of arrival. I do

this even if I am going to be a few minutes late. Your client will (presumably) be ready and waiting and it is only fair to let them know.

4. Communicate with All Parties. Ensure that everyone is in the loop at all times; talk with everyone in the area. A large hospital hired me to ascertain why the readings on the personnel radiation dosimeters had suddenly escalated. It was only through a chance discussion with the department housekeeping personnel that I discovered the solution to the problem.

5. Respect your competition. Remember they are as determined to make a success of their business as you are and they have to buy groceries too. If you get the contract, analyze what you did correctly. If you didn't win the contract, learn from the experience and identify what you could have done differently.

6. Don't sell yourself short. It should not cost you money to achieve a contract. When you are bidding on a contract there may be another physicist or company bidding as well. Make sure you have priced your quotation fairly, allowing yourself some "wiggle room" and then hold to your price.

7. When you are initiating a contact, your "sales pitch" should always include the added benefit of your expertise. Someone else may cost less but may not offer all the credentials that you can offer at the end of the report.

8. Call in a colleague with different skills if you find the job takes you beyond your area of expertise. Sometimes you may need a machinist or an engineer. Over many years you will build up a list of reliable associates who have expertise in many areas and who are willing to work with you provided you acknowledge them in your final report and even pay them for their assistance if that is appropriate.

9. Be creative. Think outside the box. Find a solution to the problem that may be unusual or unique. A situation arose at a veterinary clinic where the installation of the dental x-ray unit was in question. There was simply nowhere to put the arm of the unit until we decided to hang it from the ceiling. With the help of the installation engineer and some creative wiring, we made it work.



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SUMMARY

In this article, the lessons learned from a lifetime of working as a physicist and an entrepreneur are discussed.