

## TECHNOLOGY PHOBIA

Steve Krar

All of us suffer from some sort of phobia, be it high places, closed areas, water, etc., and for most of these there is a cure. The phobia affecting many people over the past 40 to 50 years is **Technology Phobia**, or the uncertainty of how technology would affect their lives and their work.

Let us be honest with ourselves; all of us suffer from technology phobia to some degree or another. The introduction of the computer was the result of much fear or uncertainty of this era. It was difficult for most people to understand that an electronic box would be able to do, in a minute or so, what previously took experienced machinists an hour to do. The use of computers in the early 1960s, to control machine tools, was something most people found difficult to understand. How could this electronic box duplicate in a few minutes, the skills that took a machinist many years of practice to develop?

Technology phobia is not new, it has always been with us and strikes when there is a change in what previously had been felt to be the accepted way of doing things. We seem to be afraid of the unknown and the change associated with it.

- Our forefathers were very comfortable in driving a horse and buggy, and when the horseless carriage (automobile) came along, many suffered from technology phobia.
- Over the years as developments made the car more affordable and easier to operate, more people lost their fear of cars.
- Today most people drive cars and the phobia associated with early cars is gone.

### **Technology Phobia in Teaching**

Most teachers were taught how to develop courses of studies and as their skills improved, better courses of study evolved and teachers felt more comfortable in teaching. The computer again affected our security; here was an electronic box we knew very little about, and would change our secure world of teaching forever. The computer led to the development of newer manufacturing technologies that meant courses of studies had to be revised. Naturally, anyone can justify teaching the same course of study by saying that schools were only meant to provide the basics of a trade, and it was up to industry to train the graduates in new technology. However, many failed to see that computers also changed the basics of machine tool courses. With over 90% of the machine tools manufactured in the world computer-numerically

controlled, a basic knowledge of CNC programming is as essential as the ability to read engineering prints or speak English.

Although machine tool operations and processes are basically the same as they always were, the method of operation has changed dramatically. Instead of the machinist turning handles to make the machine perform certain operations to produce a part, the computer, through the central processing unit (CPU), now controls the machine tool movements. The job of today's machinist or operator is to program the CPU so that it can machine one, or a thousand parts exactly the same.

It is important to look closely at world trends since new technologies brought about dramatic changes that have implications for training and retraining technical workers. The following is an excerpt from the observations of a nationally-known technical educator:

"While recently observing a "new wave" lathe operator, I compared his work to my experience in the same field many years ago. My work as a lathe operator was more of a craft, based on training and experience. His work was primarily an intellectual activity that involved programming skills and the selection of pre-ground cutting tools designed for the metal, cutting speed, and finish desired. There is almost no common element between the old and the new activities; to even consider that the old method can compete with the new is ridiculous. Observations such as this have convinced me that those teachers who justify teaching the old skills, because there are still many shops out there using the old methods, are consciously or unconsciously using that argument as an **excuse not to change**".

### **Technology Phobia in Industry**

Most machinists were taught the basic of metal-removal techniques and over many years in the trade became quite skilled and comfortable in their ability. The computer again affected their security; here was an electronic box we knew very little about, and would change our methods of machining forever. The computer meant some old skills were no longer necessary and new skills and knowledge were required. With over 90% of the machine tools manufactured in the world computer-numerically controlled, a basic knowledge of CNC programming is as essential as the ability to read technical prints or to speak English.

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to make the machine perform certain operations to produce a part, the computer now controls the machine tool movements. Today's machinist or operator must program the computer to machine one, or a thousand parts exactly the same. Many did not understand computers and continued to teach the same courses and this logic lead to a lack of student interest in machine tool courses, and student enrolment steadily declined. This resulted in many machine tool shops being closed, and students no longer had the opportunity to explore manufacturing-related courses.