

Watchmaking

How to Keep the Mechanical Arts Alive in a Digital Age

by Joel Trenalone (CA)

"The art of Horology, or of measuring time by clocks and watches, unquestionably ranks among the most wonderful productions of the mechanical arts."

—*New and Complete Clock and Watchmakers' Manual* by Mary L. Booth, published in 1877.

I recently followed a thread on one of the online forums regarding an attempt to manufacture a balance staff using modern CNC (computer numerical controlled) equipment. Although the nuances of setting up the machinery to produce a one-off staff were interesting, some would conclude that making the staff by hand on a watchmaker's lathe is more efficient and faster and uses simpler, less expensive equipment. Of course, this assumes that one has mastered the art of staff making.

When the mechanical watch was supplanted by the quartz-regulated watch (analog or digital), the art of watchmaking and repair dwindled. Although high-end mechanical watches have experienced a resurgence in popularity since the mid-1990s, the number of craftsmen who specialize in antique technology is dwindling, and gleaning information from the older generation of craftsmen is of utmost importance.

Let's look at a literal example of a "lost art," and ways in which we can help preserve skills that are in danger of being lost today.

Lessons from the Past

Information can be a fragile commodity. Consider the Antikythera mechanism, an ancient astronomical calculator thought to have been made around 150-100 BC. A panel of contemporary experts and complex computer modeling aided in determining what this tool was used for. Those who have studied the device are amazed by its complexity and technology.

Yet, the knowledge to produce such a device was lost for thousands of years. The wheel teeth (hand "V" cut at a 60° angle) could mesh with any other wheel in the device. It was previously thought that this technology was not developed until the

fourteenth century. This knowledge and skill was entirely lost, and subsequently reinvented.

Even in the digital age, the possibility of losing information to time exists. To quote the columnist John C. Dvorak, computer data "because of ever-changing media is actually getting more and more fragile, in the sense that you can end up with data stored on subsystems that no longer function and have no replacement." We have all experienced this when data stored on an older 3.5-inch diskette is unretrievable with newer computers. The need to maintain verified, accessible information in hard copy, not virtual, format is crucial.

Gathering Information Today

There is no substitute for gathering information from the older generation of watchmakers or those who have learned from these masters, and I have been fortunate to know a behind-the-scenes group of craftsmen who are willing to share their knowledge with others, hoping to keep the craft alive.

Many aspiring watchmakers learn their craft from books and the Internet, if unable to attend a school. Digitized public domain books on sites such as Google books provide invaluable information. One does

need to be mindful that some older repair techniques may not be acceptable today, because the emphasis today is toward preservation and not necessarily repairing the watch with whatever means are available. But much can be gleaned from reading old issues of, for example, the *Jewelers' Circular and Horological Review*.

One note of caution: The speed with which information can now be distributed poses a two-edged sword. On one hand, many may learn from others over distances using email and various online distribution tools; on the other hand, disinformation can be distributed equally rapidly. The responsibility lies with those who disperse information to carefully consider the accuracy of their words and with those on the receiving end to be aware of the enormous range of possibilities for both brilliance and error provided by Internet research.

In conclusion, whether we are just learning the craft or have many years of experience with these fine old timepieces, let us make it a goal to responsibly share our information, making good use of current technology and using "old" technology to keep this art alive. ☒

About the Author

Joel Trenalone runs a small antique and vintage watch repair shop whose sole storefront is a webpage. He resides in Chico, CA, where he also works as an architect. He can be contacted via email: jtrenalone@timepieceshoppe.com and on the Web: www.timepieceshoppe.com