

Diabologic: Information Tsunami

by Frank Dolinar

It was only within the 20th century that science came out of the labs in which it had been cloistered to become part of our daily lives, though the scientific method still eludes many people.

Along with it came data, lots of data, in ever growing collections, expanding like the wavefront of a nova. Data that needed to be examined, organized, and understood. We don't always get it right, though, because data in its raw form comes in a plethora of disguises and must patiently be coaxed before the information it contains will consent to an introduction.

Anthropology and paleontology look at the history of our human species, examining each minute clue in hopes of finding some physical evidence to our origins. Evolutionary biology seeks to find the patterns and the path of the changes in our genome that have led from Lucy, about 3.5 million years ago, to modern humans.

Long before we knew anything of physics and astronomy, we looked at the moon, planets, and stars and tried to fathom our place in the universe. Today, cosmologists search outward into that universe finding marvels everywhere accompanied by ever more unexpected questions. At the small end of the scale the realms of quantum mechanics and string theory beguile and confuse us with perplexing and often counter-intuitive descriptions of how the tiniest bits of matter and energy organize their dance to create the macro world of our experience.

Biology and medicine have wrought miracles and provided treatments for diseases that a century ago could and did kill millions. Yet these are still young sciences. Our understanding of *how* living organisms function was profoundly altered after biological researchers got inside the cell and began to illuminate the details of the chemical soup they found. Within a few years around 1970, biology stopped being a coat rack for taxonomy and properly became the deep study of molecular organic chemistry. There are, no doubt, more revelations in our future.

A mere forty years ago, the computers of the day were little better than manual adding machines. Compared to today's laptops, the room-filling computers of 1970 were dinosaurs. Today millions have and use computers at work and at home. Business, entertainment, research, and communications would come to a standstill without them. Still, only a small percentage of users understand the computer's capabilities.

We are capable of many things our ancestors would have perceived as magical or perhaps impossible. Having these capabilities produces a conundrum. We are not significantly *smarter* than our grandparents, we just have more advanced tools and toys. Indeed, if we take a longer view, we are not significantly smarter than the ancient Greeks. Indeed, there are questions about how well we use the tools we have and how much we understand of the information they provide to us.

We have become impatient, our lives filled with an obsession with ticking clocks, deadlines, and the need for constant, instant communication, inundated by the waves on a sea of information, looking for a way to navigate. Who among us would spend the time needed to master the fundamentals of the Greek Trivium and Quadrivium or place years of their lives in the hands of the Guildmasters to learn a craft?

Few people, today, seem to think history is relevant, but without it we cannot truly appreciate the tools our sciences have provided. Beyond history, there are other doors to perception through art, literature, music, and philosophy, each of which has evolved its own sensitivities in response to subtle harbingers of change in a culture, while the general populace is unaware of such clues.

We've learned a great deal about many things in the last century. It hasn't always been easy. If we are to take advantage of the information we have available to us, we must make use of all of it, look for and use interactions among disciplines, separate fact from myth, glean understanding where possible, leave questions open when they cannot be answered, and continue to learn.

We must, as in Roger Zelazny's classic tale "A Rose for Ecclesiastes," take a poet to Mars.

Anything less leaves us adrift in ignorance.