

The Velocity of Change September 2010

If there is one constant in our lives today it is change. There is nothing we can do about it...tomorrow will be different...it always is...or so we seem to have experienced in my lifetime.

I was a young pup when my family got our first television. How keen was that, gathering together on Sunday evenings to watch The Wonderful World of Disney, or a few years later following the Olympics, held in some far off exotic land, broadcast on my old favorite, ABC's Wide World of Sports.

Today we carry a television, now just another smart phone application, in our pocket. Prior to TV we had radio. That too is now on our smart phone. The iPhone, smaller than the human hand, has over 200,000 applications. Barely ten years ago all I had was a one function cellular phone.

Fifty years ago no one thought of calling China or India, and certainly not Russia. Today most anyone with a phone can call anyone else in the world. From the simple Leave it to Beaver days it seems we are now living beyond 2001, A Space Odyssey. Of course change has been a constant throughout history, but probably on no previous occasion has there been so much of it, in such a short period of time. Why?

Let's go back to the birth of humanity. According to archeologists, the hominoid species began about 2.5 million years ago. It is suggested those early "ancestors" were scavengers, happy to run across a dead animal or edible berry bush close to their shelter. Those early hominoids remained scavengers for about seven hundred thousand years. Not much change in any one-lifetime back then!

No one really knows why, but the first major sea change from scavengers to hunter-gatherers showed up about 1.8 million years ago. Well after that transition was entrenched, just a short 200,000 years ago, our branch of hominoids, Homo sapiens, surfaced. "Modern man" remained hunter-gatherers for 190,000 years, until the Neolithic Era ushered in farming.

Farming developed at different times in different parts of the planet. The most prolific advancements supposedly occurred between 9,000 BC and 7,000 BC. Some regions of the world though, didn't make the transition to farming until around 2,500 BC. So when we consider the assimilation of technologies supporting the economic activity of farming, that global transition period lasted several thousand years. Here again, not much change there in any one particular lifetime.

Agriculture served as the foundation for the development of cities. As farming productivity increased, more people congregated to both support and benefit from greater and more sustainable food supplies. And as more people came together, the sharing of, and collaborating on ideas inspired a massive transformation of humanity. Societies and cultures developed. Significant scientific discovery began that continues to this day. Farming inspired the aggregation of greater numbers of people, which provided fertile ground for the exchange of ideas, the process needed for innovation.

The Bronze Age showed up about five thousand years ago. It took a couple thousand years for bronze technology to reach mature global user penetration. After came the Iron Age, which "only" took about

Armchair Economic Perspective
The Velocity of Change
September 2010

a thousand years to reach mature global user penetration. But then things stalled out for the next thousand years, the period we call the Middle Ages, the Dark Ages. Why did we languish for so long?

One reason might be that at this point our ability to innovate had reached its maximum productivity. There was only so much we could create sharing ideas one person at a time, one small group at a time. We needed more mindshare bandwidth, which meant we needed more communication bandwidth, especially since during this period a social and economic elite controlled communications and resources. There may be no better example of the barriers to innovation and overall economic prosperity than the managed economy and managed societies of the Middle Ages.

Gutenberg's printing press changed everything. The printing press allowed ideas to be communicated to hundreds and thousands of people up and down the social and economic order. Still though, it took about three hundred years for printing press technology to reach a level of user penetration before it inspired the next sea change.

Since the Industrial Revolution's birth in late 18th century England, the world has been on an innovative tear. Transportation advances inspired increased trade and travel, allowing more minds to share more ideas, increasing the velocity of innovation. Communication advances like the telegraph, and more importantly the telephone, grew idea distribution and collaboration, increasing the velocity of innovation and change even more.

A bit more than two hundred years later, barely seconds in the life of human history, we now have a device smaller than the human hand that can perform over 200,000 functions. In a very few years virtually everyone in the world will have one. And when they do the pace of innovation and change will likely increase dramatically.

The more people exchange ideas, the more we will innovate, and the more things will change. What can we expect now that almost everyone on earth has access to, and can collaborate on, not just all the ideas of today, but also all the ideas of our entire human history?

If we go back 200,000 years to the birth of modern humankind, little changed for tens of thousands of years, then little changed for thousands of years, then little changed for hundreds of years. Today, sea change can happen in less than one lifetime. Change has gone from rarely noticeable just a few hundred years ago to in our face every day.

First we had the scavenger to hunter-gatherer revolution. Then we had the agriculture revolution, then the industrial revolution. Each dramatically changed our economic and social order. Today we are at the beginning of the fourth major sea change in human history. It should come as no surprise to see a much different world just a few short years from now.



Douglas A. Leyendecker
713-862-3030
doug@armchaireco.com