Community Comment – April 10th, 2017
By Jon Sapper
Medicine and Technology – Amazing

We are going to see some incredible advances in medical technology within the next twenty years that I believe could have the potential to increase life expectancy by several decades. Think about it. It wasn't that long ago we were glued to the news for days following the world's first heart transplant. Now, it's a relatively common practice.

Face and hand transplants and artificial skin for burn victims are among the mind boggling recent advances in medicine and medical technologies. But the work currently developing that I believe will advance medicine and life expectancy quantum leaps forward is 3-d printing of living body parts. Please stay with me here before branding me a kook. Living body parts including sections of bone, muscle and cartilage are being custom made through a 3-d printing process involving regenerative medicine. These 3-d implants are functioning properly in a research environment. The folks at Nature Biotechnology state, "This breakthrough raises the hope of using living tissues to repair the body and the idea of placing individual human cells in a precise pattern to replace a damaged jaw, missing ear or defective heart muscle holds much promise."

This 3-d printing system combines biodegradable plastic that provides the foundation for individual cells to grow. Over time, blood vessels and nerves grow into the tissue. These researchers believe that it will be LESS than a decade before trials will begin on printing customized organs and tissues. It does raise questions. As we age, can human organs that naturally wear out be replaced by using our own cells and making customized ones for us? It seems like we are right on that edge. Push this thinking out a hundred years and a number of issues surface. Our entire health care, economic and social system is built, to some degree, on current life expectancies. If that changed by 30 years where most folks lived to be 110 or 120 and were able to function ok, that would certainly have far reaching implications.

Before you think this is way too crazy, please keep in mind how "crazy" the idea of heart, kidney, face and hand transplants were just a few decades ago. These medical advances increased the life expectancy significantly to those who

received the transplant gifts. It's a matter of scale. Since we are currently using human donors for organ transplants now, just think how this could scale if we start making replacement organs for each of us by just using a few of our own cells.

This has been Jon Sapper for Community Comment.