80 Year Periodicity of Scientific Revolutions

Edward Lewis, March 14, 2009

Scientific revolutions in physics have happened at about 80 year intervals since 1506 when Copernicus introduced a heliocentric physics, explaining the fall of objects as the impetus of objects. Since then, in response to the experimental anomalies of their times, an individual has more or less independently of other people introduced new basic physics postulates—new concepts of the fall of objects, the nature of energy, and the causes of motion, and of matter and atoms. Thomas Kuhn called these episodes of theoretical change "Scientific Revolutions," and there have been six such episodes of reformulation during the period from 1506 to 1905 when Einstein introduced the basic ideas of quantum theory and relativity theory.

Copernicus formulated a paradigm for physics and astronomy in 1506 that involved impetus as the cause for fall. After Copernicus, Gilbert, Galileo and Kepler (in 1582, 1593, and 1595 respectively), coincidentally but more or less independently of each other thought that fall was a magnetic effect. That is, they believed that gravity is magnetism. They also believed that bodies had a tendency to rest. Then Newton defined gravity in 1664. He thought that atoms have the invisible force of gravity. In 1745, Franklin introduced rational fluid theories for heat and for electricity, and he may have introduced the hypothesis of the magnetic fluid. Aepinus developed the magnetic theory of the Fluid paradigm. It was believed that electricity and magnetism were distinct fluids. In 1820, Faraday introduced the basic ideas of field theory incorporating a point-atom idea like that of Boscovich. He taught that atoms had a line of force. He provided the experimental, and much of the theoretical, foundation upon which James Clerk Maxwell developed classical electromagnetic field theory during the1860s. He taught that heat was due to the motion of atoms. In 1905, Einstein formulated the basic concepts of both Quantum Mechanics and Relativity theory. He introduced the hypotheses that matter and energy are equivalent and may interconvert and that matter is quantized, laying the basis for quantum mechanics and the quantum mechanics based electronic, photonic, and genetics industries. As you can see, these revolutions in the field of physics happen at about 80 intervals.

It is known among the people who believe in "cold fusion" and modern physics anomalies that during the 1970s, 1980s, and 1990s, a number of important physical anomalies were discovered involving high temperature superconductivity, transmutation and energy phenomena, and the association of high temperature superconductivity and low temperature atomic transmutation processes. Other important anomalous phenomena include the EVs of Ken Shoulders and anomalous plasmoid behaviors, the generation of strange new microscopic objects during transmutation experiments, and the processes involving continued material transformation by transmutation and atomic motion after an experiment is long over as various kinds of structures such as dendrites form and the microscopic objects and particles are emitted.

Was the last period of experimental discovery during the 1970s, 1980s, and early 1990s a "crisis period" as defined by Kuhn? If so, has a new physical paradigm been introduced? Has there been a physical scientific revolution? The gist of the new physical paradigm is the newly discovered objects and material activity, and the anomalous natural and astrophysical phenomena. Anomalous microscopic objects that are emitted during transmutation experiments have been called "strange radiation" by Russian researchers such as Urutskoev, micro ball lightning by Matsumoto, EVs by Ken Shoulders, and Lochak monopoles by Lochak, Urutskoev, Adamenko and other researchers. The behavior and structure of these objects are not well understood, but they have been studied since at least the 1980s by Ken Shoulders. During the 1990s, Matsumoto reported their presence in his transmutation experiments and also during an earthquake and a volcanic eruption. As the experimental results show, these objects are outside the scope of quantum mechanics or relativity theory to explain. Their behavior is similar to the behavior of ball lightning which is a macroscopic natural phenomenon. Like ball lightning, microscopic ball lightning pass through glass or other materials in strange ways, and exhibit similar strange motions and behaviors. They may both pass through glass without leaving behind a tunnel and move through materials and glass by boring a tunnel through them. Like macroscopic ball lightning, these objects may leave behind tunnels, pits and grooves when they contact materials. Like these objects, natural ball lightning is associated with transmutated and anomalously structured materials, and leave interesting markings. Large natural ball lightings with anomalous behaviors or remains are often classified as UFOs.

It is not yet possible to define the structure and characteristics of these objects. More experimentation is required. Until then, it is not possible to develop a comprehensive theory of the newly discovered phenomena. There is as yet no theory that is generally accepted by transmutation/excess energy experiment researchers. But some basic ideas are that microscopic ball lightning and macroscopic ball lightning are both associated with transmutation and anomalous energy radiation in excess of conventional chemical processes and that microscopic ball lightning plays a role in many types of transmutation experiments. Also, these ball lightnings may be involved in time change. Atoms may themselves be structured like ball lightning, and atoms and ball lightning may interconvert. Atoms may enter a state I call the ball lightning state. In this state, atoms behave very anomalously such as transmuting and forming anomalous structures and exhibiting superconductivity. This state of matter was previously unknown.

Each scientific revolution in physics enabled the advancement of technology. Starting from Franklin's novel conceptions about the conservation of the distinct fluids of heat and electricity, the scientific revolutions enabled the major industrial revolutions. The First Industrial Revolution started about 50 years after Franklin's introduction of the paradigm, the Second Industrial Revolution started about 75 years after Faraday had his basic Field theory ideas, and the Third Industrial Revolution started about 70 years after Einstein's first work. The industrial revolutions began about two generations after the initial basic theory and were preceded first by a generation of development of the paradigm's theory, and then by a generation of experimentation. This is why the invention and major industry foundation of the industrial revolutions coincided with the "crisis periods" in physics.

The physical principles of a paradigm involve conceptions about the experimental manipulation of phenomena. Physics is our understanding of the environment, so changes in physics allow us to

manipulate the environment in new ways, making new technology and inventions. In papers that were published online and in the ICCF10 and ICCF11 Proceedings, it is explained how the industrial revolutions have resulted in a series of economic depressionary periods. The economic rhythm is called the “long-wave” or “Kondratiev wave.” In those articles, people may learn about the reason for the economic depressionary period that started last year.