

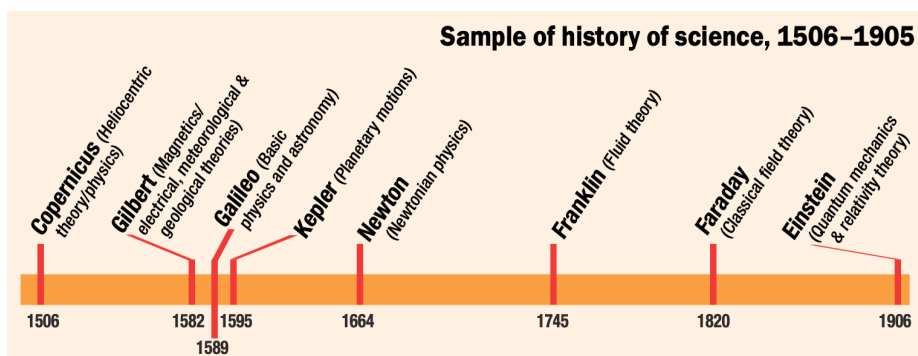
What the History of Physics Helps Us Predict About the Development of the Microplasmoid Field

E. Lewis¹

¹scientificrevolutions.com, Illinois, USA, e2023@fastmail.com

Physics develops through paradigm change, and paradigm change happens every 80 or so years because paradigm change is a 3 generational process. The paradigm change cycle causes the Kondratieff Wave in economic development. In 1989, I realized that a paradigm shift in physics was happening based on cold fusion, ball lightning, and other anomalies of the crisis period from 1970 to 1989. Based on the past timing and pattern of paradigm development, we can predict the timing of what might happen in the future development of this microplasmoid field and the plasmoid paradigm.

Physics develops through paradigm change, and paradigm change happens every 80 or so years because paradigm change is a 3 generational process. See Figure 1. The series or cycles of scientific revolutions that continue until now began in 1506, but there is evidence that the cycle was happening before 1506 too. The paradigm changes, times of scientific revolution in physics, result in industrial revolutions about 60 to 70 years afterwards generally. In 1989, I realized that a paradigm shift in physics was happening based on the cold fusion, ball lightning (BL) and other anomalies of the period from 1970 to 1989. Nowadays, some of the leading theorists who propose a model of what I call “microplasmoids” and what Russians usually call “strange radiation” are saying that a paradigm shift is happening in physics. Among these are Mishinsky and Lutz Jaitner. Scientific revolutions and the development of paradigms of physics are a 3-generation process, and based on the past timing and pattern of paradigm development, we can predict the timing of what happen in the future development of this microplasmoid field and the plasmoid paradigm.



Three Generations For a Paradigm

Each paradigm shift in physics has had three generations who developed the paradigm.

In the first generation, usually a young man in his 20s who grew up during a “crisis period” in physics interprets the anomalies and unsolved questions in physics with a new point of view that he thinks according to in order to interpret the anomalies. This new point of view is a theoretical way of thinking that is based on his own hypotheses and assumptions that he gathered while observing and trying to understand the anomalies. I call these people theoretical formulators. Sometimes, the theoretical formulators are older than 30 as Franklin was, but the qualifying characteristic is that they are inexperienced with the standard theory of their time. Franklin was relatively uneducated in Newtonian theory when he started his physics research independently. Of course, more than one man may independently formulate a paradigm theory at the same time. This happened during the 1580s and 1590s when Gilbert, Galileo, and Kepler more or less independently formulated slightly different theories. However, they mostly agreed with each other about theory. Galileo and Kepler, for example, wrote letters to each other and told each other that they agreed with Gilbert’s physics ideas.

The second generation is born about the same time a theory is first formulated. They grow up familiar with the new theory and understand the need for the theories of the paradigm to be developed, and they help to develop the theory to a high level by about 40 years after the theory was formulated.

Then a third generation who were born during the time the theory was being developed grew up who study the developed theory. When they reach middle age, they try to apply the developed theory for technological innovations, and some then do experiments that help them to discover anomalies to the theories that they believe. The time during which major anomalies are discovered that lead to the formulation of a new paradigm was called a “crisis period” by Kuhn in his famous book called *The Structure of Scientific Revolutions*. The crisis periods last about 10 or 20 years according to him.

For more information about the theory of cyclic paradigm change and examples from the history of science, see this article that was published two years ago in *Cycles Magazine*[1].

Example of the Quantum Mechanics/Relativity Paradigm

Each paradigm shift in physics has had three generations who developed the paradigm.

For an example of the three generation process of paradigm change, consider the development of quantum mechanics and relativity theory in the early 1900s. From about 1883 to 1905, there was a crisis period in physics. One of the major anomalies that were discovered was that the speed of light does not vary based on direction as was expected theoretically by those who believed in Field Theory. This effect was discovered by Michelson who was born in 1852 and Morley. Other anomalies were discovered such as particles, black body radiation, and the photoelectric effect. By learning about and trying to understand these anomalies, Einstein introduced a new point of view, a new paradigm, with

new basic ideas for quantum mechanics and relativity theory in 1905. The hypothesis of quantum of energy, the idea of mass and energy equivalence, and the basic ideas of special relativity theory are among the basic hypotheses and assumptions he introduced for his paradigm.

Then, the second generation who were born about 1905 and grew up familiar with his ideas helped the two theories, general relativity for gravity and quantum mechanics for energy and atomic theory, to develop to full development in the 1930s and 1940s. These second generation theoretical developers included Heisenberg who was born in 1901 for quantum mechanics and Chandrasekhar who was born in 1910 for astrophysics and relativity theory. Physicists including Tomonaga and Schwinger who was born in 1918 helped to develop Quantum Electrodynamics to a high level and received Nobel prizes in 1948. By about 1950, the theoretical development was mainly completed.

Then, a third generation who were born during the time the theory was being developed started to introduce new technology based on quantum mechanics and new scientific apparatus, and they started to discover anomalies in the crisis period from 1970 to 1992.

- About the year 1970 and for some years afterwards, B.V. Deryaguin who was born in 1902 and others discovered “polywater” properties.

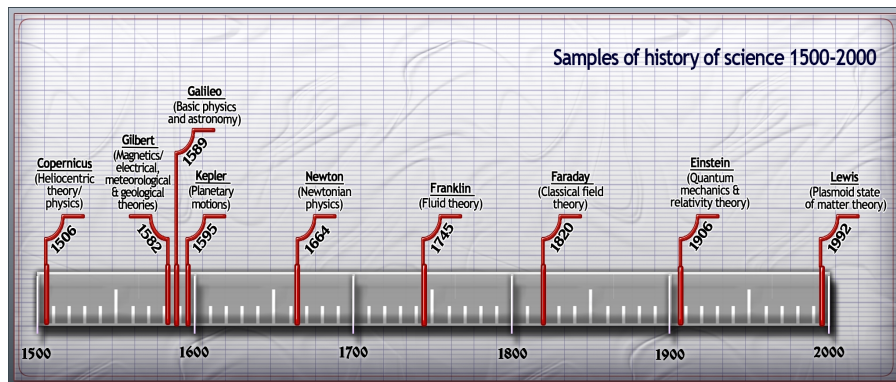
- During the 1980s, Ken Shoulders who was born in 1927 studied what he called EVs. I call these micro ball lightning (MBL) or microplasmoids. Ken considered the EVs to be little components that he discovered in the larger plasmoids studied by Winston Bostick from the 1950s to the 1970s.

- In 1986, Johannes Bednorz who was born in 1950 and Karl Müller discovered high temperature superconductivity.

- In 1989, Stanley Pons and Martin Fleischmann who was born in 1927 announced they discovered fusion in electrolysis cells. They had been working on this kind of experiment secretly in the late 1980s.

The announcement of this effect that came to be called “cold fusion” started much experimental research, discussion, debate, and suppression for a few years until about 1997.

Development of the Plasmoid Paradigm



Matsumoto was one of the early experimenters who tried to replicate the Fleischmann and experiment. He was born in 1942 at a time when the basic theory of quantum mechanics was close to fully developed, and he learned quantum mechanics as he was growing up. He was one of the third generation of people who helped to discover anomalies during the crisis period from 1970 to 1992. When he did experiments with heavy water and palladium, he discovered some major anomalies. The first one he published about was that by using EDX to analyze his electrodes, he discovered that many elements were present in his electrodes that were not there previously, and that these elements were concentrated in microscopic voids and cavities. This started the research on transmutation of elements heavier than hydrogen that became a main research topic by the middle of the 1990s. Bockris, Miley who was born in 1933, Patterson, and many others including Shoulders started to do experimental research on heavy element transmutation about the middle of the 1990s.

Then in early 1992, he announced in *Fusion Technology* that the particle detection films he had arrayed next to this remarkable electrolysis cell had registered strange tracks he had never seen before that were micrometer-sized rings and lines. He believed that the cell that produced the transmuted atoms also emitted something that caused the tracks and traces, but he didn't know what caused them.

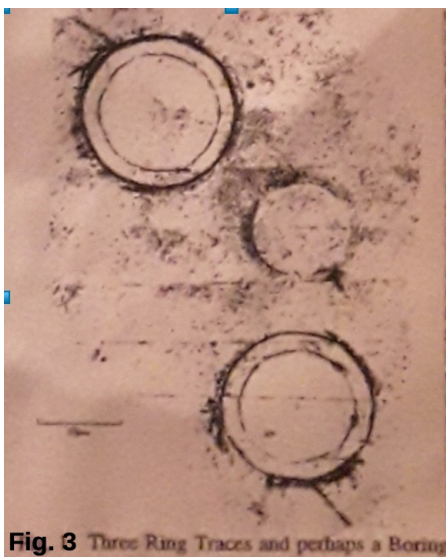


Fig. 3 Three Ring Tracks and perhaps a Boring

I realized he was producing MBL because he reported he had discovered ring markings, and ball lightning is known to leave behind characteristic ring markings. See Figure 3 by Matsumoto. I told him this hypothesis, and Matsumoto started to research about micro ball lightning in 1992. I told him that it was the MBLs in his palladium electrode that caused the transmuted atoms he found inside the electrode. There was a range of different elements in what had been a pure palladium electrode. These MBL left the cell by going through the glass container the way that BL is able to do. This was part of the evidence those were really MBL that made the ring tracks and linear tracks on the particle detector sheets.

Matsumoto's and Ken Shoulders' work helped me to understand that there is a 5th state of matter in the early 1990s that I called the ball lightning state or the plasmoid state. See the chart in Figure 2. However, because there was a lack of evidence since these anomalies were never widely studied around the world and few really understood their existence, I felt there was not enough evidence to develop a complete theory. All I could do is try to guess about the structure and properties of this kind of matter.

What is happening now might be similar to what happened with the Copernican and Galilean paradigms. Because there was strong opposition from the Catholic leadership

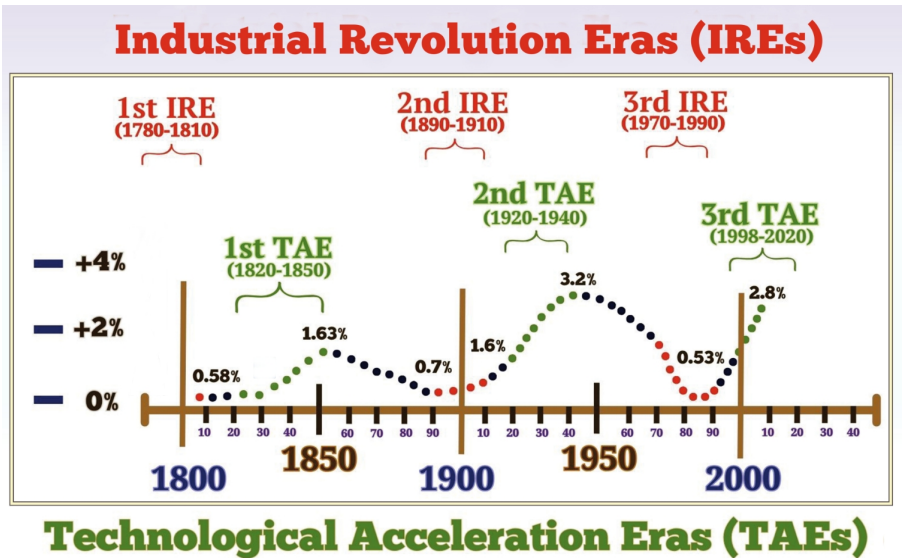
against heliocentric theory and their physics, both men hid their much of their work until they were old. However, both paradigms developed in about 80 years anyway. Since there is strong opposition now, I do not know when the world will generally accept this physics.

Predictions about Future Theoretical, Experimental and Possible Industrial Development of the Plasmod Paradigm

The second stage of extensive theoretical development usually starts about 20 years after theoretical formulation. The second stage ends about 40 years after theoretical formulation, in this case, 2032, and then during an industrial revolution based on the new paradigm, new industries based on plasmod theory might start to be built about 60 or 70 years after the theoretical formulation in 1992.

Because scientific revolutions in physics happened approximately every 80 years, there have been industrial revolutions when the theory of each paradigm were well developed and the inventors started to introduce new technology. Figure 4 shows that when the three industrial revolutions (IRE) have happened and how they coincided with an industrial revolution economic depression era when old industries were dismantled and disappeared and new industries began that involved the work force and resources of the United States. The chart also shows when the Technological Acceleration Depressions (TADs) occurred.

You can see that the depression eras are spaced approximately 40 or 50 years apart, and this is the cause of the Kondratieff Wave that Nikolai Kondratiev wrote about in economics articles in the 1920s and 1930s. The two kinds of depressionary eras in the US alternated. The cycle was 1780 (IRD), 1830 (TAD), 1890 (IRD), 1929 (TAD), 1973 (IRD), and 2008 (TAD). This long economic cycle or economic wave in the US and other leading industrial economies is called the Kondratieff Wave.



Evidence That This Kondratieff Wave and Science Cycle Theory Is Valid

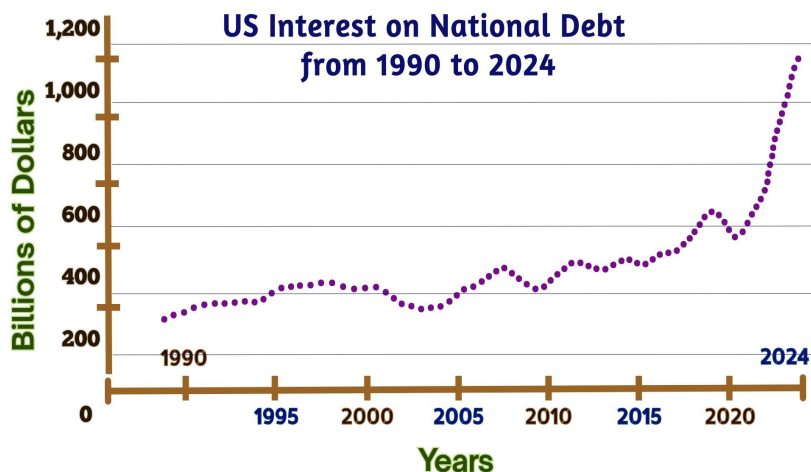
Evidence that this theory is valid is that it gives accurate predictions. The theory was developed in 1989. In the 1990s, I predicted in several articles that productivity growth acceleration would begin about the year 2000, that there would be an economic boom from 2000 to about 2009, and that there would be a financial crash like the 1929 crash about the year 2009. The predictions were accurate.

In the 1990s, the theory predicted that after 2009 there would be an economic depression era similar to the 1930s depression. This depression started in 2008 actually, and there were many bank failures, a surge of consumer bankruptcies, and a jump in unemployment as I had predicted. However, after 2008 until now, HUGE MASSIVE deficit spending in the US and some other countries have kept people working and supplied with a sufficient amount of funds so there hasn't been a visible depression.

Now, however, unprecedented peacetime deficits keep the government operating, and people get government subsidies to consume and survive. The National debt is expected to reach \$36 or \$37 trillion in 2024—and the deficit will total about \$3 trillion in 2024. Government deficit growth has accelerated: The debt has more than doubled in the 5 years since 2019 when it was \$17 trillion. Roughly \$31 of the \$37 trillion has been added since 2008. The debt to GDP ratio in January 2024 was 123%. The previous record was 119% in 1946, after WWII.

As the Figure 5 shows, the interest on the US National debt is now exploding too. In 2024, the annual interest is almost double what it was in 2020. The government must borrow to pay this interest of over a trillion dollars this year.

It seems obvious that, without the approximately \$31 trillion of government borrowing from 2008 to the present, we would have suffered a severe depression. At this point, we're still on the downside of the Kondratieff long wave.



Predictions for the Next 40 or So Years

If a sufficient number of young people in their teens or early 20s or older people who are inexperienced learn the basic ideas of this new paradigm and it becomes their paradigm, then they might help to develop this paradigm by about 2032. $2032 = 1992 + 40$ years. By then, the paradigm might be generally accepted. Even if it isn't, generally accepted but is accepted by enough people, then major technological development leading to the development of entirely new industries might begin about 2052. $2052 = 1992 + 60$ years. These major technological innovations will be made by people of the third generation of this paradigm who were born about the time when the theory is being developed by the second generation.

So based on the timing of the Kondratieff Wave, an industrial revolution based on plasmoids might start in the 2050s. At the same time, the technological innovations will also enable the development of new types of scientific instruments and experimental equipment that are based on plasmoid theory that will enable people to discover major anomalies. So a physics crisis period might start around the same time about 2052 or 2057.

At the same time, during the industrial revolution, there will be another depressionary era similar to the low productivity growth IRE depressions of the 1780s and 1790s, 1880s and 1890s, and the 1970s and early 1980s as the economies switch over to the development of industries based on plasmoid theory and quantum mechanics based industries begin to close down and become obsolete.

For example, nuclear power generation may become obsolete as people learn to make energy with plasmoid devices. This would be similar to the way that the whole wagon and

carriage industry of the late 1800s was replaced by the automobile industry that was based on the technology of the Faraday paradigm.

Conclusion

Scientific revolutions have occurred in physics approximately every 80 years since 1506 when Copernicus first formulated this heliocentric theory and physics. This happens because the development of each paradigm until the crisis period stage requires 3 generations. This happens, as described in other articles such as Reference 1, because of two limiting factors on cognition and technological innovations.

This pattern seems to be continuing. The plasmoid paradigm seems to be developing slowly, and some people such as Jaitner have attempted to develop a quantum mechanical based theory for the plasmoids and microplasmoids. This is important so that we can understand the 5th state of matter better and for experimental work to be accomplished.

However, as far as I have seen, few young people are familiar with BL, 5th state matter properties and characteristics, and the experimental results. I feel that experimental research has only just begun on this state of matter. It may be important for the theoretical development of this paradigm that many more people, especially young people, believe that the microplasmoids exist and cause transmutation. So far, budgets have been small and experimental researchers have not worked with the best equipment available. This is important so that the characteristics and properties of fifth state plasmoids and microplasmoids may be better understood. Also, astrophysical plasmoids and atmospheric plasmoids must be studied intensively.

Perhaps in the future, according to the timing described above, younger people may develop new theories of this paradigm by the 2030s, and another plasmoid industrial revolution might begin in the 2050s coinciding with a crisis period in physics and an industrial revolution depressionary period.

LITERATURE

1. Lewis E. Paradigm Shifts in Physics Cause the Kondratieff Wave // *Cycles Magazine*. 2022. 51(1). pp. 30-45 <https://journal.cycles.org/Issues/Vol51-No5-2022/>

Что История Физики Помогает Нам Предсказать о Развитии Микроплазматического Поля

Е. Льюис¹

¹scientificrevolutions.com, Иллинойс, США, e2023@fastmail.com

Физика развивается посредством смены парадигм, а смена парадигм происходит примерно каждые 80 лет, потому что смена парадигм — это процесс трех поколений. Цикл смены парадигм вызывает в экономическом развитии волну Кондратьева. В 1989г. я понял, что сдвиг парадигмы в физике, происходил, основываясь на холодном синтезе, шаровой молнии и других аномалиях кризисного периода с 1970 по 1989гг. Базируясь на прошлых сроках и закономерностях развития парадигмы, мы можем предсказать время того, что может произойти в будущем развитии этого микроплазматического поля и плазматической парадигмы.