

# Freedom in Education

By Jon Thoreau Scott – Oct. 2022

An old military adage states that when you are in the Army never volunteer for anything. I made this mistake when replying to an E-mail from Jerry Mintz last month. I gave him my opinion that I don't get too involved in all of the AERO conferences because not all of the members of AERO recognize, sincerely, the value of freedom in the learning process. In many of the AERO conferences I got into arguments with some who had good ideas about such things as democracy in education, child-centered learning and other approaches, but I thought that some ideas involved too much teaching and grading and not enough encouragement of the learning process.

I mentioned to Jerry some schools that I think "got it right" and included the school I attended that followed the principle of freedom in the learning process described in Elizabeth and Alexis Ferm's book entitled *The Spirit of Freedom in Education* (1919, 1923) that can be found on the internet. The last chapter of the second printing is by Alexis Ferm. Jerry challenged me to write my views on the subject. I also mentioned that the Albany Free School, the Sudbury Schools and one that Jerry ran in Vermont many years ago fit my idea of how a school should be organized. In this (hopefully short) essay I will try to explain why I think that freedom in the process of learning is the best approach toward educating citizens of a democratic country. This list that I gave is, of course, not complete and many schools are excellent in my view including Summerhill, Montessori and Waldorf Schools that involve some structure that I feel is not needed and may get in the way of true learning for some students. But they are very good schools. Also, as Jerry points out often, homeschooling can be very effective when done right. Why is "freedom" in the learning process better than even some of the good schools?

Let me first state what I feel should not take place in schools. This includes almost all of what goes on in the American public schools. I feel that curricula, classes, lecturing, testing, grading, rewards and failures are anathema to true learning. Making students sit in rows of classes, indoors, listening to teachers lecture, I think stultifies learning. Only a few students get the good grades while the rest don't learn very much. Children, especially young boys, should spend much of their days outdoors,

Single age groups, or classes, are not as good as mixed age groups. The best "teachers" of young students are other students of either the same age, younger or older.

As the Ferm's put it learning and not teaching is appropriate in the education process so I feel that encouraging students to learn by themselves is the best technique to follow. I think it was Chris Mercogliano writing about the Albany Free School who said something like: "Get them started and then get out of the way" when helping a child to learn. Chris' book *Making it Up as We Go Along* that describes the Albany Free School

is one of the best sources on what I think is proper and we have essentially no differences. He states it better than I.

The Ferrer Modern School. In the rest of this opinion, I will use only examples of freedom in education that involved me in the Modern School of Stelton, N.J. and follow this with how I feel such early schooling affected much of my life.

The main principles of this education process can be found in the book by Elizabeth and Alexis Ferm *The Spirit of Freedom in Education* mentioned above. The theory in the main text and was written by Elizabeth (the children called her "Auntie") in 1919. In 1923 the book was republished with a final chapter written by Alexis (we called him "Uncle"). Since, in my opinion, Uncle was by far the best practitioner of freedom in education that I have known, I encourage interested persons to follow what he says about the learning process in the last chapter of this book.

The Stelton Modern School was moved from New York City in 1915 to a dreary part of Middlesex County New Jersey that was mostly fairly poor farmland. The Modern School community was founded by people who paid for building lots on the original 68 acres (more was added later) in order to have their children attend the Ferrer Modern School. Thus, the school was part of the community and the community was part of the school. The Firms emphasized learning by doing. Children were allowed to wander and play throughout the community and children participated in the activities of the community. No doors were locked. They did useful work all day long. While play (or in some cases work) was emphasized the school grounds had provisions for art, weaving, sewing, ceramics, wood and metal work, blocks for building and gardening in season and Froebel's gifts. A print shop and manual printing press allowed the children to write, set the print, and publish their own book "*Voice of the Children*" that was published periodically.

A muddy stream, Ambrose Brook, was adjacent to the school, as were the woods and fields of the surrounding farmland and they provided nature study. Fishing, swimming, skating and boating were regular activities and children organized sporting games throughout the day. Games included baseball, football, basketball, kickball, stickball ice hockey on nearby Lake Nelson and the like. Many of the common games such as kick the can, hide and go seek were organized by the children and the children invented many games. Overnight trips were organized during good weather. Nature walks were common.

Children, together with teachers, ran the school and a weekly meeting took place on Fridays where all (including teachers) had only one vote. Periodically, children participated with teachers to wash the windows, clean the grounds, of the whole community and whitewash the outer walls of the school about once per year. Children participated in building when a new part of the school or shop was needed or repaired. The coal stove, to heat the main building, was kept burning by the older children.

Children were not required to stay in school. There were only two required meeting times each day. The morning assembly at about 9:00 AM was used for announcements, dancing and singing. I still remember most of the songs we sang, many adapted from classical music. At 3:00 PM children were required to be at the school to clean a room that was assigned weekly. The school was never closed and ran through the whole year including in summer.

Thus, play plus arts and crafts were the main activities of the children of the Stelton Modern School under the guidance of the Firms. There were no classes except for special classes requested by the students. These were rare. There were no grades or grade levels so that mixed aged groups were normal. On some occasions children did act in plays, or gave concerts to the community on Saturdays. Children were encouraged to participate, but were not required to do so. At age 12 I played Touchstone in a reduced version of the play *As You Like It*. At other times children presented stories or sang songs that they themselves had written.

So, how did I learn the “three R’s”? Of course, many games involved knowing some arithmetic and a few words such as those found on cereal boxes and road signs started us in the reading processes. The game “hangman” was played by the children and helped in learning to read. I learned some addition when “Monopoly” was played by the children.

Arithmetic. There was no organized teaching of things like arithmetic or reading at the Modern School under the Firms. When a child wanted to know how to add, subtract, multiply, and the like, she asked a teacher to teach her.

When children from the local public school were practicing their multiplication tables on their way home from the nearby public school, they chided me that I did not know what they were doing. They had sheets for multiplying numbers with answers on the back. So, I asked Uncle Firm to show me how to multiply. He gave me the little black writing book that had a multiplication table (up to 12 times 12) on the back and said just memorize that. I worked on getting the right answers for about three hours, but missed some of the hard ones. He then showed me how to work from the easier ones (ten, twenty thirty etc.) to get those that were not so easy to remember. For example, seven times nine is one seven less than seven times ten or 70 minus 7 equals 63. I could then do the whole table by either adding or subtracting from the easy one! I took this method to the children the next day and asked them some of the hard ones. They struck out most of the time, but I didn’t. Of course, I didn’t need to know the multiplication tables at that time and suspect that neither did they except to go on in their programmed schoolwork. It took only four hours for me to learn how to multiply!

Reading. When I was about ten years old children from the local public school owned comic books and could read them, but I could not. My mother Jo Ann Wheeler was the designated reading teacher and when a child wanted learn to read, they asked her to teach them. She also used the hands-off process and gave me a book of poems in

which there were some that I knew by heart. She said to start with "Little Robin Red Breast" which I knew from memory and if there were words I could not make out to ask her for help. By this process I was able to read comic books in a few days of practice. She suggested that I go with her to the library to get books I wanted to read. I loved the movie "The Wizard of Oz" and finished that book in a few days. Note that we did not have to stay in school so I did my reading at my home just a short walk from the school building. I then wanted to read some other of Earl Frank Baum's Oz books so she showed me how to take out books from the nearby library. I read several of the Oz books and then went on to read many of the young people's classics such as Tom Sawyer and Huckleberry Finn. Twain's "The Mysterious Stranger" was my favorite as was "The Story of a Bad Boy" by T. B. Aldrich and I read both at least twice. My reading was always done in the mornings: in the afternoons I helped to organize sports or games.

Algebra. I don't remember why I wanted to learn algebra except that it was to copy some of the older children who were doing algebra in the public schools. This was in 1945 when I was thirteen. I pushed for us to have a small class. Three of us met with Uncle Ferm for hour long "classes" three times a week (MWF) for about four months. Uncle did not lecture to us but helped us solve problems after we studied each chapter of a high school freshman level text book. Two others, both girls, were also in this study group. I was avidly interested in the subject, but the other two were less serious about it. I was able to do most of the problems.

Our family left Stelton in 1946, a year after our algebra class to a small farm in East Taghkanic, NY (Columbia County) that was owned by my parents. They enrolled me in a central school (Roeliff Jansen) when I was fourteen. I was required to take algebra in this first year of high school (9<sup>th</sup> grade). Needless to say, I was able to master the exams the teacher gave weekly so well that I asked him if I could move on to the next level (Geometry). He agreed, but the school superintendent did not. So, I had to sit through a class in algebra that I had already mastered back in the Modern School in Stelton. Note that I learned algebra with no teaching (just problem solving) in Stelton in about four weeks. I must add that only a few students in my algebra class at Roeliff Jansen could master the subject and most were bored. The class lasted for a whole year (Sept. through June) and met for five hours per week.

Undergraduate study. Freedom in learning had an effect on my undergraduate study at Cornell University. I majored in Biochemistry, but asked my advisor to allow me to take a variety of classes that were not normal to my program. Two were graduate courses that seemed interesting to me. One was a soil chemistry course in which I did very well. It was taught by a professor very much involved in the subject and interested in teaching. The other was a graduate course on the chemistry of bacteria. It was taught by a professor who was very active in research and showed up in only about half of the class meetings. It was chaos and I learned very little. He used no textbook so I couldn't easily get to learn by myself what he was supposedly teaching. It was a waste of time.

Thus, my list of courses at Cornell was quite varied and not typical of programs of most undergraduate students.

Graduate study at Wisconsin. Although I majored in Biochemistry as an undergraduate, I switched to Meteorology to study at the University of Wisconsin, Madison, a field that had fascinated me all of my early life. My major was meteorology with an emphasis on climatology, but my minor was in Plant Ecology which was a major part of things my father taught me around our min-farm in Taghkanic, N.Y. Most meteorology grad students minored in Physics, Mathematics, or Chemistry. My PhD thesis was in Physical Limnology – a study of the energy balance of ice-covered lakes in cold climates.

Lifetime of learning. Did freedom in learning, early in my education, affect my later life? This is difficult to prove because the additional effect of parents and friends cannot be measured. But I suggest that being given the responsibility to learn by myself with no classes, and especially no grading, had a profound effect on the way I lived my life. I did well in high school, four years at Cornell, the Air Force flying program and graduate work at the University of Wisconsin. The motivation came, at least to some extent, from the way I was treated in the Modern School in Stelton where self-motivation was emphasized. Motivation comes naturally to children so that adding grades and rewards only makes the competition a hinderance to natural learning. It also leads to bullying in my opinion.

After I earned my PhD in Meteorology, I obtained a position in the State University of N.Y. at Albany (now the University at Albany). Early on in this status I pursued scientific projects in the manner that Thomas Kuhn calls “Normal Science” that involves getting research grants and supporting graduate students with their theses. I was successful at this for some time, but did not follow the usual course of sticking to one research topic as is normal in science. I pursued research in a variety of topics that were interesting to me. This included lake mixing processes, great lakes circulation, coastal currents in the N.Y. bight, forest-environment relations, acid deposition in Adirondack forests and the study of heat processes in a passive solar home. I helped organize an environmental studies program at UAlbany and participated in groups in the study of how science works. Such a varied program does not get one into the National Academy of Sciences.

This was far from the “normal” practiced by most scientists in my field. The “normal” is discussed by Bruce Charlton in a review he entitles *Zombie Science: A Sinister Consequence of Evaluating Scientific Theories Purely on the Basis of Enlightened self-interest*. It is in the journal *Medical Hypothesis* (2008, 71, 327-329) and can be found on the internet. He suggests that scientists choose to organize their research using criteria based upon how well it will benefit their careers. Thus, many wrong ideas become “zombie science” and are kept alive by those who promote or publish on the idea if it benefits their careers. They become peer reviewers in journals and tend to reject ideas that go against their own beliefs. I felt that this is quite common in science and Charlton’s paper is worth reading. I found myself trapped in this conundrum, at least to some extent, and it seemed to go against my early educational background.

So, I gave up on “normal science” and followed my early interest in science philosophy. I left unpublished several papers that were nearly complete. I pursued an idea that had come to me when I was doing research on ice-covered lakes and that I used as a topic for teaching how plate tectonics might work. I suggested to my students to see if any hypothesis on the forces of plate tectonics involved the method in which pressure ridges form on ice-covered lakes in cold climates. It seemed to me that the physics of pressure ridges on lake ice was similar to the physics of the great ocean ridges that lie between continents at the bottom of the oceans. This thinking started in the 1964 when I brought up the topic in a senior/graduate level class in General Oceanography. In that class I discussed how I thought Alfred Wegener’s drifting continents helped form the shape of ocean basins. I proposed, as a class project, that students examine the idea that ice ridges and ocean ridges were similar. I found no takers to work on the problem in this and other classes. Eventually I formed a group of serious students to discuss the concept on weekends and we wrote a paper to present to the American Geophysical Union (AGU) meeting in 1986. We also sent it for publication to the journal *Global and Planetary Change*. The AGU accepted it only as a poster session and the two peer reviewers of the journal (GPC) journal turned it down which was not unexpected to me. They did not prove it to be wrong, but said that if we had read the appropriate papers, we would have rejected it ourselves. This is often the way the peer review system works as has been shown over the history of science. For example, Wegener’s idea of continental drift that he first proposed in 1917 was rejected by the scientific community until the mid 1960s when geologists found evidence that it was correct.

One can read my idea by logging on to a web site [tectonicforces.org](http://tectonicforces.org) and the most complete paper to read on that site is *On the Forces of Plate Tectonics*. Also, on that site I discuss comments of the reviewer who, as usual when new ideas are presented for publication rejected it without proving it to be wrong. Peer reviewers typically do not disprove ideas when they reject them for publication; they merely dispute it, in some cases no doubt to keep their pet zombie idea alive.

I might point out that the forces that cause the tectonics plates to move is still not known and at least seven mechanisms have been presented. Thus, at least six are “zombie” ideas including my own even though my idea has not yet been “born” in the geologic community.

In summary, going through the freedom in education as presented by the Ferns in the Modern School has probably caused me to lead a life that was not normal. I suggest that not being forced into a prescribed curricula that involves competition for grades and other rewards early in my life caused me to lead an unconventional way of living. I shall not try to prove this herein and leave the idea to others. For further reading consult Paul Avrich’s, *The Modern School Movement* (1980, Princeton Univ. Press).