**Introduction**

In the mid-twentieth century, Dr. Emil Feuerstein (1912-1993) published through Sreberk Press in Tel Aviv a book entitled *Discovering and Inventing Jews*. Feuerstein, a native of Hungary, had begun his education in a traditional Jewish school, but went on to study in universities in London and Basel (Tidhar 1949, 1362). After his immigration to Palestine in 1935, Feuerstein published popular Hebrew-language science books, many of which were aimed at young readers. *Discovering and Inventing Jews* began with a dedication to the author’s son – “A gift to my firstborn son Benjamin on the occasion of his *bar mitzvah*” (Feuerstein [1953] 1955, 3) – and its publication by Sreberk, which specialized in children’s literature (Neiger 2017, 102-106), was in keeping with the book’s intended audience. A look at the book’s table of contents reveals a lengthy series of nineteenth- and twentieth-century Jewish figures, well-known and obscure alike, who contributed to the development of science and technology in the modern era. The list includes, among others, Siegfried Marcus (1831-1898), one of the first developers of the automobile; Isaac Merritt Singer (1811-1875), inventor of the sewing machine; Wolfgang Pauli (1900-1958) and Albert Einstein (1879-1955), winners of the Nobel Prize for physicals; and Chaim Weizmann (1874-1952), the chemist and inventor who served as the State of Israel’s first president.

Feuerstein extolled the role of Jews in the advancement of modern science and technology. In the book’s first chapter, “Jewish Genius Nobel Laureates,” Feuerstein describes at length the high percentage of Jews who have been awarded this prestigious prize. In his telling, the magnitude of this achievement had been obscured by the fact that prizes are listed according to the winners’ countries of origin. Feuerstein detailed how the Nazis had stolen the credit for the design of the first automobile model from the German-Jewish inventor Siegfried Marcus (Neiger, 60–64), and related the difficulty and poverty Albert Einstein endured in Switzerland because of his Jewishness (Neiger, 97).

What were the goals of Feuerstein’s book? First, to spread scientific and technological knowledge, such as the function of penicillin, the structure of the atom, and the technological basis for such appliances as the loudspeaker and radio. In so doing, Feuerstein gave voice to the notion that scientific and technological knowledge was of great practical use to the young generation. The scientific revolution that took place between the sixteenth and eighteenth centuries in Europe gave birth to new fields of knowledge, leading to fundamental changes in the realms of religion, society, and economics. Technological innovations based on scientific knowledge reshaped contemporary daily life, and led to the creation of an educational literature that disseminated, detailed, and explained the fundamental principles of these innovations. The foundational work by John Amos Comenius (1592-1670), *Orbis sensualium pictus*, written in the seventeenth century and intended for children, included illustrations encompassing a wide range of scientific subjects, including the water cycle in nature, various animals, and the organs of the human body, and even familiarizing its young audience with modern technologies such as the printing press (Comenius 1658). In the first half the eighteenth century, popular science books for children and young adults began to appear, some of which attained wide distribution, testifying to the importance of this particular medium to the dissemination of the ideals of modernity and enlightenment (Koepp 2006). The novel program presented by Jean-Jacques Rousseau in his 1762 book *Emile* dealt with changes not only to educational methods, but to educational content as well. According to Rousseau, children should be taught things relevant to their own world, and thus Emile experientially studies geometry, geography, astronomy, physics, and chemistry (Rousseau [1762] 2009, 306-330). Following in Rousseau’s footsteps, the Philanthropin movement, arising in northern Germany in the final third of the eighteenth century, sought to create a foundation of rational education, in the spirit of the Enlightenment, with an emphasis on the natural sciences. The German reformers stressed that the educational process should be interesting, enjoyable, relevant, and helpful to its young charges. They also devoted attention to professional and practical education, with special emphasis given to scientific topics. Natural and geographical studies were granted a central position, and the reformers’ schools included nature exhibits and laboratories, and augmented the course of study with the planting of educational gardens, nature tours, and other activities (Simon 1953; 151; Brüggemann und Ewers, 1982, 32; Wild, 1990, 53; Bowen 1981, 197-201; Schmitt, 1990, 165).

But the dissemination of science and technology among children and young adults was not only meant to prepare them for a thorough integration into modern, industrialized society. Just as prominent was the role of science and technology in establishing the young person’s national identity. Scientific and technological education became an indicator of modern education itself. As the eighteenth century yielded to the nineteenth, Napoleon established an educational network of military academics, which supplanted the religious educational system. Prussia too, as one of France’s competitors, established a national, modern educational system (Bowen 1981, 244-257). During the nineteenth century, especially in its second half, knowledge of science and technology became an integral part of the formal educational curriculum in Europe and the United States, spreading through interaction with economic, political, and social necessities (see, for example: Donnelly 1991; Donnelly 2001, 14-20; Lerman 1997; Kohlstedt 2010, 11-36).

Aside from reforms in formal education, which were often carried out with unsatisfactory sluggishness, other elements of culture, through the medium of recreational literature, provided children and young adults with scientific and technological knowledge. Pierre-Jules Hetzel (1814-1886), who for fifty years was the central force in the French publishing world, felt that his country’s loss in its war against Prussia (1870-1871) was the result of its inferiority in scientific knowledge. For many years, he edited a bimonthly children’s magazine that published entertaining stories about science, as well as texts extolling the virtues of scientists. Through his publications and his publishing house, he also provided an outlet for the important science fiction writer Jules Verne (1828-1905). Verne’s books were based on a deep scientific and technological knowledge of his era, and the majority of his readers were young people. The notion that France’s future success was bound up in scientific and technological domination, and that scientific knowledge held latent educational and patriotic themes, struck root in French culture in the latter third of the nineteenth century (Hendrick 1992; Unwin 2000, 46-48; Evans 2000). In nineteenth century England, too, youth publications served as an alternative channel to the official educational network, and worked to increase children’s curiosity and interest in the fields of science and technology. They included zoological knowledge, presented experiments in chemistry and electricity, and more. Some of these newspapers were widely distributed (Dixon 2001; Noak 2004; Kohlstedt 2010, 31; Sheets-Pyenson 1985, 560). Alongside religious and political leaders, and sometimes even in their place, scientists and inventors became figures of much admiration. Biographical or autobiographical texts on Isaac Newton, Benjamin Franklin, or Louis Pasteur became classics of educational literature (for examples of this, see Theerman 1990; Sinkoff 2000; Hendrick 1992, 149).